AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-16 (Canceled).

17. (Original) A computer-readable storage medium storing instructions that when executed by a computer cause the computer to perform a method for performing a minimum computation for an interval operation, the method comprising:

receiving at least four floating-point numbers, including a first floating-point number, a second floating-point number, a third floating-point number and a fourth floating-point number; and

computing a minimum of the at least four floating-point numbers;

wherein if the at least four floating-point numbers include one or two default NaN (not-a-number) values and the remaining values are not default NaN values, the default NaN values are ignored in computing the minimum.

18. (Original) The computer-readable storage medium of claim 17,

wherein the minimum is a left endpoint of a resulting interval of the interval operation;

wherein the first floating-point number is the result of an operation between the left endpoint of a first interval and the left endpoint of a second interval;

wherein the second floating-point number is the result of the operation between the left endpoint of the first interval and the right endpoint of the second interval;

wherein the third floating-point number is the result of the operation between the right endpoint of the first interval and the left endpoint of the second interval; and

wherein the fourth floating-point number is the result of the operation between the right endpoint of the first interval and the right endpoint of the second interval.

19. (Original) The computer-readable storage medium of claim 17, wherein computing the minimum involves setting the minimum to a value representing the empty interval, if any of the at least four floating-point numbers contain the value representing the empty interval.

20. (Original) The computer-readable storage medium of claim 19, wherein the value representing the empty interval is a non-default NaN value.

21. (Original) The computer-readable storage medium of claim 18, wherein computing the minimum involves setting the minimum to negative infinity if the first floating-point number is a default NaN value and the fourth floating-point number is the default NaN value.

22. (Original) The computer-readable storage medium of claim 18, wherein computing the minimum involves setting the minimum to negative infinity if the second floating-point number is a default NaN value and the third floating-point number is the default NaN value.

23. (Original) The computer-readable storage medium of claim 17, wherein if none of the at least four floating-point numbers is a default NaN value or a value representing the empty interval, computing the minimum involves selecting the minimum of the at least four floating-point numbers.

24. (Original) The computer-readable storage medium of claim 18, wherein the operation can include one of a multiplication operation and a division operation.

25. (Original) A computer-readable storage medium storing instructions that when executed by a computer cause the computer to perform a method for performing a maximum computation for an interval operation, the method comprising:

receiving at least four floating-point numbers, including a first floating-point number, a second floating-point number, a third floating-point number and a fourth floating-point number; and

computing a maximum of the at least four floating-point numbers;

wherein if the at least four floating-point numbers include one or two default NaN (not-a-number) values and the remaining values are not default NaN values, the default NaN values are ignored in computing the maximum.

26. (Original) The computer-readable storage medium of claim 25,

wherein the maximum is a right endpoint of a resulting interval of the interval operation;

wherein the first floating-point number is the result of an operation between the left endpoint of a first interval and the left endpoint of a second interval;

wherein the second floating-point number is the result of the operation between the left endpoint of the first interval and the right endpoint of the second interval;

wherein the third floating-point number is the result of the operation between the right endpoint of the first interval and the left endpoint of the second interval; and

wherein the fourth floating-point number is the result of the operation between the right endpoint of the first interval and the right endpoint of the second interval.

27. (Original) The computer-readable storage medium of claim 25, wherein computing the maximum involves setting the maximum to a value representing the empty interval, if any of the at least four floating-point numbers contain the value representing the empty interval.

28. (Original) The computer-readable storage medium of claim 27, wherein the value representing the empty interval is a non-default NaN value.

29. (Original) The computer-readable storage medium of claim 26, wherein computing the maximum involves setting the maximum to positive infinity if the first floating-point number is a default NaN value and the fourth floating-point number is the default NaN value.

30. (Original) The computer-readable storage medium of claim 26, wherein computing the maximum involves setting the maximum to positive infinity if the second floating-point number is a default NaN value and the third floating-point number is the default NaN value.

31. (Original) The computer-readable storage medium of claim 25, wherein if none of the at least four floating-point numbers is a default NaN value or a value representing the empty interval, computing the maximum involves selecting the maximum of the at least four floating-point numbers.

32. (Original) The computer-readable storage medium of claim 26, wherein the operation can include one of a multiplication operation and a division operation.

33-48 (Canceled).